REVIEWS OF BOOKS

HEREDITY

Moore, Eldon. *Heredity, Mainly Human.* London, 1934. Chapman & Hall. Pp. 343. Price 15s.

THE number of books on heredity continues to increase, but usually each newcomer justifies its appearance by some novelty in the treatment of the subject or some qualities which differentiate it from those that have gone before. Thus it is with Mr. Moore's venture. It is distinctly different from any other book on heredity. It has a character and an outlook suggestive of a very distinctive personality and of interests somewhat different from those of the exclusively scientific geneticist. Those who remember Mr. Moore's " editorials," when he was conducting the EUGENICS REVIEW, will recall that his interests and sympathies tended to concern themselves especially with the sociological implications of heredity; and so, in the present volume, it is those aspects of the subject that bear directly and obviously on human and social life that receive the most detailed treatment.

The purpose of the book is plainly set forth in the prologue. It " is intended neither for the student nor the schoolchild . . . but for that rather neglected person, the educated and intelligent reader who knows nothing of the subject, but wishes to understand its main outlines without intending to pursue it much further." It is, therefore, in a sense, a " popular " book, and this must be borne in mind when considering the author's rather unconventional methods of exposition. Nevertheless, it covers the whole subject, and conscientiously devotes the first four chapters to a detailed description of the mechanism of heredity, including Mendelism.

Beginning with a short study of the paramecium, the author conducts the reader through all the intricate processes whereby the germ cell becomes transformed into a zygote and is launched on its career as a new individual. And it is here that he has exercised his ingenuity in an effort to simplify the rather involved matter and present it in a form as attractive as possible to the lay reader. Whether the simplification is actually achieved is a little doubtful. Matter which is in itself complex cannot be greatly simplified by the mere replacement of technical terminology by familiar words, though the aspect of the text may be made to look less alarming. Mr. Moore's device is to present the chromomeres as soldiers and the chromosomes as platoons of those soldiers, whose manœuvres are directed and controlled by officers—the centrosomes; and the descriptions are helped out by coloured diagrams, which are excellent in themselves, but which suffer from the defect of being assembled at the end of the book; an arrangement much more convenient to the printer and binder than to the reader. One feels that explanatory diagrams are more effective if placed in the text to which they refer.

Having completed, in the first four chapters, the treatment of the mechanism of heredity, including an excellent account of the determination of sex, the author proceeds to the various applications of the facts already established, keeping the interest focused chiefly on the human manifestations, and referring to the lower animals and plants mainly for the purpose of illustration. And in this, having regard to the purpose of the book, he is probably well-advised. For to the lay reader, intelligent and educated though he may be, the subject of heredity in the abstract is apt to appear rather remote. The most lucid accounts of the manner in which individual characters are transmitted in peas or primulas or even in mice tend to leave him cold. His feeling is that " the proper study of mankind is Man," and his chief interest is in those aspects of heredity which may affect him personally, or the effects of which he may observe in his fellows or in their reactions in social and political life.

Nevertheless, in some of the chapters, Mr. Moore makes very effective use of the

experience that he acquired while working at the Bureau of Animal Genetics. In that, for instance, dealing with hybrids, the discussion of the "rationale of hybridization" is preceded by a description of the effects of crossing different species as exhibited in the well-known hybrids among our domesticated animals. And again, in the chapter on in-breeding—a subject of profound social interest—the facts elicited by the experiences of stock-breeders are treated at some length as exhibiting the process with a degree of intensity unknown in the case of man.

But it is the later chapters that Mr. Moore seems to have found the most satisfaction in writing; a satisfaction which will be communicated to the reader; especially to the kind of reader to whom the book is addressed. After a slightly unsatisfactory chapter on brain and mind—unsatisfactory because the scope of the matter leads to rather uncomfortable condensation—he proceeds to a study of the inheritance of amentia. This is an admirable chapter, which, treating as it does of a subject that is specially in the public mind at the moment, will be read with keen interest and great profit. It opens with a lively and detailed description of three defective families compiled from the notes of an expert worker among aments, and the long description is elucidated by an excellent pedigree chart. The detailed study is followed by an analysis and genetic interpretation, and the rest of the chapter deals with the general aspects of the subject and with its social bearing.

Space does not admit of a separate notice of each of the succeeding chapters, but they are all excellent, and they undoubtedly form the most valuable part of the book. They treat respectively of the inheritance of great ability, special abilities (particularly musical and mathematical), sheer mediocrity, intelligence and social class, etc., and the book concludes with an admirable little Epilogue on eugenics and heredity, from which a characteristic passage may be quoted:

> "I am not attempting to depreciate the value of genetic research into human qualities—very much the opposite. But I do want to emphasize that the standards of eugenics are those of biological common sense, not mathematical certainty. . . . The general principles of eugenics are infinitely better grounded, less disputed than Conservatism, Liberalism, Socialism, or any of the other policies which to-day invite our support."

Taking the book as a whole, it appears to fulfil very completely the purpose for which it was written, and to form a valuable addition to the literature of heredity and eugenics. The lively, vigorous, breezy style in which most of it is written will make it attractive to the lay reader, while the mass of information that it contains will commend it to the more serious student.

R. AUSTIN FREEMAN.

POPULATION

Lorimer, Frank, and **Osborn, Frederick.** *Dynamics of Population: Social and Biological Significance of Changing Birth-Rates in the United States.* New York, 1934. Macmillan. Pp. xiii+461. Price $4. London. Macmillan and Co. Ltd. Price 15s.

THIS may truthfully be described as the first social demographic survey of the United States.* It might also be described as a national eugenical survey, though that might be too narrow. As a summary of much that is best in recent population and eugenic literature, this volume seems to me altogether the best in the English language; in fact, if any Continental treatise excels it, I cannot recall what it is.

Lorimer and Osborn have been very temperate in the discussion of extremely difficult scientific questions. Much harm has been done to sound eugenical thought in the past by its discussion having been taken up by well-intentioned, but half-informed, scatter-brained writers. These authors are the very antithesis of all this. *The Dynamics of Population* is based upon hundreds of factual studies carefully sifted for their meaning and implications; and while one occasionally

* The authors, in their glossary, define social demography as wider than formal demography (vital statistics); the former includes a study of the causes and social consequences of population trends.